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PRELIMINARY DETERMINATION  
ON PERMIT APPLICATION

Date of Mailing: October 31, 2008

Name of Applicant: Knife River Corporation

Source: Portable Drum Mix Asphalt Plant

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 2699-02.

Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Resources Management Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by December 1, 2008. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT 59620.

For the Department,

Vickie Walsh  
Air Permitting Program Supervisor  
Air Resources Management Bureau  
(406) 444-3490

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Air Quality Specialist  
Air Resources Management Bureau  
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VW:JM  
Enclosures

## MONTANA AIR QUALITY PERMIT

Issued To:	Knife River Corporation	Permit: #2699-02
	P.O. Box 9	Application Complete: 09/23/08
	Belgrade, MT 9714	Preliminary Determination Issued: 10/31/08
		Department's Decision Issued:
		Permit Final:
		AFS #:

An air quality permit, with conditions, is hereby granted to Knife River Corporation (Knife River) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### SECTION I: Permitted Facilities

#### A. Plant Location

Knife River operates a portable drum mix asphalt plant with the initial location of Section 7, Township 1 South, Range 5 East in Gallatin County. Permit #2699-02 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations in or within 10 km of certain PM<sub>10</sub> nonattainment areas.

#### B. Current Permit Action

On September 23, 2008, the Department received a complete application from Knife River to update the equipment list in Permit #2699-01 and to change the name from A-1 Paving, Inc. to Knife River. The Department modified the permit as requested and updated rule references and permit language to reflect current rule references and permit language used by the Department.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

1. Asphalt plant particulate matter (PM) emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).
2. Knife River shall not cause or authorize to be discharged into the atmosphere from the asphalt plant operations any stack emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).
3. Knife River shall not cause or authorize to be discharged into the atmosphere from systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

4. Water and spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Section II.A.3 (ARM 17.8.749).
5. Knife River shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM (ARM 17.8.308).
6. Knife River shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).
7. A wet scrubber for PM air pollution control, with a device to measure the pressure drop (magnehelic gauge, manometer, etc.), shall be installed, operated, and maintained on the asphalt drum mix dryer. Pressure drop must be measured in inches of water. Temperature indicators at the control device inlet and outlet must be installed and maintained (ARM 17.8.752).
8. Asphalt production shall be limited to 525,000 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
9. Operation of the hot mix asphalt facility (includes drum dryer, burner, plant load-out, and silo filling) shall not exceed 3800 hours during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).
10. Knife River shall not operate more than one diesel-fired engine/engine-powered generator at any given time with a maximum rating of 900 horsepower (hp) (ARM 17.8.749).
11. The asphalt production rate shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Knife River, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
13. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart I, Standards of Performance for Hot Mix Asphalt Facilities (ARM 17.8.340 and 40 CFR 60, Subpart I).
14. Knife River shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CR 60, Subpart III, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, for any applicable diesel engine (ARM 17.8.340, 40 CFR 60, Subpart III, ARM 17.8.342, and 40 CFR 63, Subpart ZZZZ).

## B. Testing Requirements

1. Environmental Protection Agency (EPA) Methods 1-5 and 9 source test(s) shall be performed every four years on any New Source Performance Standards (NSPS) affected equipment at the asphalt plant to demonstrate compliance with the applicable emission limit(s) in Section II.A.1, Section II.A.2, and Section II.A.3, respectively. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973. (ARM 17.8.105, ARM 17.8.749, and 40 CFR 60, Subpart A and Subpart I).
2. Pressure drop on the wet scrubber control device and process temperature must be recorded daily and kept on site according to Section II.C.4 (ARM 17.8.749).
3. Pressure drop on the wet scrubber control device and process temperature must be recorded during the compliance source test and reported as part of the test results (ARM 17.8.749).
4. Knife River may retest at a higher production rate at any time in order to achieve a higher allowable production rate (ARM 17.8.749).
5. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
6. The Department may require further testing (ARM 17.8.105).

## C. Operational Reporting Requirements

1. If this asphalt plant is moved to another location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. Knife River shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Knife River shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include *the addition of a new emissions unit*, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an

increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).

4. Knife River shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. The records compiled in accordance with this permit shall be maintained by Knife River as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).
5. Knife River shall document, by month, the asphalt production from the facility. By the 25<sup>th</sup> day of each month, Knife River shall calculate the crushing production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Knife River shall document, by month, the hours of operation of the facility. By the 25<sup>th</sup> day of each month, Knife River shall calculate the hours of operation from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.9. the information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
7. Knife River shall annually certify that its emissions are less than those that would require the facility to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

### SECTION III: General Conditions

- A. Inspection – Knife River shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Knife River fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Knife River of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756)
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.

- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Knife River may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Knife River shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Permit Analysis  
Knife River Corporation  
Permit #2699-02

I. Introduction/Process Description

A. Permitted Equipment

Knife River Corporation (Knife River) owns and operates a portable drum mix asphalt plant. The facility includes an asphalt plant drum dryer, a generator (up to 900 horsepower (hp)), and associated equipment.

B. Source Description

For a typical operation set-up, hot mixed asphalt entails the combining of sand, gravel, rock dust, and asphalt oil. This is done in a drum dryer. Sand and gravel materials are placed in aggregate feed bins. These materials are drawn out of the storage bin at a specified rate and transferred to the drum dryer. The drum dryer removes almost all the moisture in the aggregate materials using a “burner” device. The burner is fired using propane, diesel, or other petroleum products. After drying, asphalt oil, which has been stored in nearby heated tanks, is injected into an area of the drum dryer known as the mixing chamber where the aggregate materials are coated with asphalt oil. There is a discharge chute at the end of the drum dryer which discharges the mixed asphalt product onto a drag-slat conveyor which transfers the mixed asphalt to a load-out silo. The operation, with the exception of the asphalt tank heater, is powered by a 900 hp diesel-fired generator set.

The asphalt remains in the storage/load-out silo until it is loaded into trucks for transport to a given job location. The silo is elevated so delivery trucks can drive under the load-out silo.

C. Permit History

On October 10, 1991, A-1 Paving, Inc. was issued final **Permit #2699-00** for the operation of a 1980 Cedarapids Model 8828 Portable Drum Mix Asphalt Plant. The permit allowed A-1 Paving to operate within the Kalispell nonattainment area (NW¼ of Section 22, Township 29 North, Range 21 West, in Flathead County, Montana). The permit was supported by a stipulation that protected the Kalispell PM<sub>10</sub> nonattainment area.

The Department of Environmental Quality (Department) received a request from A-1 Paving, Inc. on July 8, 1998 to modify Permit #2699-00. The modification included a change of the permitted equipment in permit #2699-00 from a 1980 Cedarapids Model 8828 Portable Drum Mix Asphalt Plant to a 1988 CMI UVM Portable Drum Mix Asphalt Plant (formerly permitted by permit #2541-04). The equipment that was previously permitted under permit #2699 (1980 Cedarapids Model 8828 Portable Drum Mix Asphalt Plant, maximum production rate of 350 tph, with a wet scrubber) has been sold and removed from the site. As a result, permit #2541-04 was revoked because it is no longer needed. **Permit #2699-01** replaced Permit #2699-00.

D. Current Permit Action

On September 23, 2008, the Department received a complete application from Knife River to update the equipment list in Permit #2699-01 and to change the name from A-1 Paving, Inc. to Knife River. The Department modified the permit as requested and updated rule references and permit language to reflect current rule references and permit language used by the Department. **Permit #2699-02** replaces Permit #2699-01.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Knife River shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.



5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>

Knife River must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Knife River shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Knife River is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
    - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
    - b. 40 CFR 60, Subpart I – Standards of Performance for Hot Mix Asphalt Facilities. NSPS-affected equipment at the Knife River facility would include any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler; systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems, which were constructed, reconstructed, or modified after June 11, 1973.
    - c. 40 CFR 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition (CI) Combustion Engines (ICE), indicates that NSPS requirements apply to owners or operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE is manufactured after April 1 2005, and is not a fire pump engine. Since this permit is written in a de minimis friendly manner, this regulation may apply to engines in the future.
  8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below.
    - a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a National Emission Standard for Hazardous Air Pollutants (NESHAPs) Subpart as listed below.:
    - b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). As an area source, the diesel RICE will be subject to this rule. However, although diesel RICE engines are an affected source, per 40 CFR 63.5490(b)(3) they do not have any requirements unless they are new or reconstructed after June 12, 2006. Since the permit is written in a de minimis friendly manner, area source provisions of the Maximum Available control Technology (MACT) requirements may apply to future engines.
- D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:
1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Knife River submitted the appropriate permit application fee for the current permit action.
  2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

- E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
  2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter, or use any asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. Knife River has a PTE greater than 15 tons per year of carbon monoxide (CO), particulate matter (PM), oxides of nitrogen (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>); therefore, an air quality permit is required.
  3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
  4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
  5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. Knife River submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Knife River submitted an affidavit of publication of public notice for the September 18, 2008, issue of the *Bozeman Daily Chronicle*, a newspaper of general circulation in the Town of Bozeman in Gallatin County, as proof of compliance with the public notice requirements.
  6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
  7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
  8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Knife River of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
  10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
  11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
  12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
  13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
  14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
  15. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of intent to transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.
- F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modification--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
  - a. PTE > 100 tons/year of any pollutant;
  - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
  - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2699-02 for Knife River, the following conclusions were made:
  - a. The facility's PTE is less than 100 tons/year for any pollutant.
  - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is subject to a current NSPS standard (40 CFR 60, Subpart I).
  - e. This facility is not subject to any current NESHAP standards.
  - f. This source is not a Title IV affected source or a solid waste combustion unit.
  - g. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Knife River will be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Knife River will be required to obtain a Title V Operating Permit.

- h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.

- i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.
  - ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.
3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal by ARM 17.8.1204(3) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

### III. BACT Determination

A BACT determination is required for each new or altered source. Knife River shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

#### Diesel Generators

Because of the limited amount of emissions produced by the diesel generators/engines and the lack of readily available/cost effective add-on controls, add-on controls would be cost prohibitive. Therefore, the Department determined that proper operation and maintenance, with no additional controls would constitute BACT for the diesel engine-powered generator. In addition, any new diesel engine would be required to comply with the new federal engine emission limitations - including either EPA Tier 2 emission standards for nonroad engines (40 CFR Part 1039) or New Source Performance Standard emission limitations for stationary engines (40 CFR 60, Subpart III).

The control options selected contain control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

### IV. Emission Inventory

Source	TPY - restricted					
	PM	PM <sub>10</sub>	NOx	VOC	CO	SOx
Drum Mix Asphalt Plant Dryer w/venturi scrubber (250 TPH)	4.83	2.78	26.13	15.20	61.75	27.55
Cold Aggregate Screens and Storage Bins	10.26	6.27	0.00	0.00	0.00	0.00
Aggregate Handling/Conveyors	8.55	3.14	0.00	0.00	0.00	0.00
Cold Aggregate Storage Piles	4.72	2.24	0.00	0.00	0.00	0.00
Diesel Generator (900 hp)	3.76	3.76	53.01	4.22	11.42	3.51
Haul Roads	5.28	1.50	0.00	0.00	0.00	0.00
<b>TOTAL</b>	<b>37.41</b>	<b>19.68</b>	<b>79.14</b>	<b>19.42</b>	<b>73.17</b>	<b>31.06</b>
<ul style="list-style-type: none"> <li>• Knife River is limited to 3800 hrs/yr of operation to remain below the Title V permitting threshold and to maintain the facility as a synthetic minor source.</li> <li>• A complete emissions inventory is on file with the Department</li> </ul>						

### V. Air Quality Impacts

Permit #2699-02 is issued for the operation of a portable drum mix asphalt plant to be operated at various locations throughout Montana, excluding those counties that have a Department-approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. An Addendum to Permit #2699-02, including more stringent requirements to protect the nonattainment area, will be required for operating at locations

in or within 10 km of certain PM<sub>10</sub> nonattainment areas. *A Missoula County air quality permit would be required for locations within Missoula County.* In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard.

#### VI. Ambient Air Impact Analysis

Permit #2699-02 will cover the asphalt plant while operating at any location within Montana, excluding those counties that have a Department-approved permitting program, those areas considered tribal lands, or those areas in or within 10 kilometers (km) of certain PM<sub>10</sub> nonattainment areas. The Department believes the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minimal and short-lived.

#### VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

#### IX. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Permitting and Compliance Division**  
**Air Resources Management Bureau**  
**P.O. Box 200901, Helena, MT 59620**  
**(406) 444-3490**

**DRAFT ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* Knife River Corporation

*Air Quality Permit number:* 2699-02

*Preliminary Determination Issued:* October 31, 2008

*Department Decision Issued:*

*Permit Final:*

1. *Legal Description of Site:* Knife River owns and operates a portable drum-mix asphalt plant at various locations throughout Montana. The current location of the facility is Section 7, Township 1 South, Range 5 East in Gallatin County.
2. *Description of Project:* The current project would be to add a 900 horsepower generator to the permitted equipment and to change the name on the permit.
3. *Objectives of Project:* The purpose of this project is to have additional energy resources to operate the facility.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because Knife River has demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in Permit #2699-02.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.



7. *The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.*

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			X			Yes
B	Water Quality, Quantity, and Distribution				X		Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts			X			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

The addition of the generator at the facility would result in a slight increase in emissions. However, at all locations the drum mix asphalt plant would typically operate within a previously disturbed area used for such purposes. Therefore, there would be a low likelihood of additional disturbance to any known terrestrial and aquatic life and habitats given any previous industrial disturbance in any given area of operation. It is unlikely that the proposed project would have significant impacts in a given area of operation.

B. Water Quality, Quantity, and Distribution

Water use would not increase because of the additional generator; therefore, no impacts on water quantity are expected. No impacts to ground water quality from pollutant infiltration are expected because of the proposed project. Storm water runoff from the facility would be subject to control and permitting under the Montana Pollutant Discharge Elimination System, as applicable. No impacts are expected to state water quality, quantity, and distribution.

C. Geology and Soil Quality, Stability, and Moisture

The proposed additional generator would have only minor impacts on soils at the drum mix asphalt plant site location because the facility would remain a relatively small industrial operation, would continue to use only relatively small amounts of water for pollution control, and would only have seasonal or intermittent operations. Therefore, there is a low likelihood that the project would cause significant additional impacts to geology and soil quality, stability, and moisture given the likelihood of previous industrial disturbance at the given area of operation.

#### D. Vegetation Cover, Quantity, and Quality

The proposed generator would be an addition to an established drum mix asphalt plant. Because minimal, if any land disturbance would be included in this proposed action, potential impacts to vegetation cover, quantity, and quality would be minor due to potential deposition of relatively minor amounts of air pollutants emitted from the asphalt plant operations.

#### E. Aesthetics

The proposed addition of a generator would be visible and would create additional noise while in operation. However, Permit #2699-02 would include conditions to control emissions, including visible emissions, from the proposed equipment. Also, because the drum mix asphalt plant would be portable and would operate on an intermittent and seasonal basis and would typically locate within previously disturbed areas, any visual and noise impacts would be minor and short-lived.

#### F. Air Quality

The air quality impacts from the additional generator at the drum mix asphalt plant would be minor because Permit #2699-02 would include conditions limiting the opacity from the plant, as well as requiring water spray, as necessary, and other means to control air pollution. Furthermore, Permit #2699-02 would limit total emissions from the proposed equipment, and any additional equipment owned and operated by Knife River, to 250 TPY or less at any given operating site, excluding fugitive emissions.

#### G. Unique Endangered, Fragile, or Limited Environmental Resources

Permit #2699-02 would regulate the additional generator along with the entire drum mix asphalt plant while located at various locations throughout the state. Most operations would take place within existing and previously disturbed industrial gravel pits thereby resulting in only minor impacts to the industrial area. In addition, operational conditions and limitations in Permit #2699-02 would be protective of these resources by limiting overall impacts to the surrounding environment. Because minimal land disturbance is proposed beyond that already permitted for the drum mix asphalt plant this proposed action, no potential impacts are likely to occur.

#### H. Demands on Environmental Resources of Water, Air, and Energy

Due to the relatively small size of the facility and relatively low potential to emit regulated air pollutants, the additional generator would result in only minor demands on the environmental resources of water, air, and energy for normal operations. Energy requirements would be accommodated through the operation of the proposed diesel-fired generator and would be minor due to the relatively small amount of fuel required to operate the generator. In addition, the generator used at the drum mix asphalt plant would operate on an intermittent and seasonal basis thereby minimizing energy demands. Further, impacts to air resources from the new generator would be minor because the source would remain small by industrial standards, would operate on an intermittent and seasonal basis, and would generate relatively minor amounts of regulated pollutants through normal operations.

## I. Historical and Archaeological Sites

No historical or archaeological sites were identified during MEPA analysis for permitting of the generator or during research conducted for this analysis. Minimal ground disturbance is proposed for this action; therefore, it is unlikely that the proposed addition of the generator would impact any historical or archaeological sites.

If, during operations, resources were to be discovered, activities would be halted, or possibly temporarily moved, to another area until the Montana Historical Society - State Historic Preservation Office (SHPO) was contacted and the importance of the site determined.

## J. Cumulative and Secondary Impacts

The proposed permit action would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment of a given proposed area of operation because the proposed generator would generate emissions of regulated air pollutants and noise would be generated from equipment operations. Emissions and noise would cause minor disturbance to a given area because the equipment is relatively small by industrial standards and the facility would be expected to operate in areas designated and typically used for such operations. Additionally, this facility, in combination with the other emissions from equipment operations at the operational site, would not be permitted to exceed 250 TPY of non-fugitive emissions.

Overall, any cumulative or secondary impacts to the above-cited physical and biological resource of the human environment of any given project area would be minor because the proposed generator and associated drum mix asphalt plant would typically operate within areas designated for such operations. Therefore, the overall industrial nature of the area would not change as a result of the proposed project and any associated impacts would be minor.

8. *The following table summarizes the potential economic and social effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.*

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores			X			Yes
B	Cultural Uniqueness and Diversity			X			Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities			X			Yes
G	Quantity and Distribution of Employment				X		Yes
H	Distribution of Population				X		Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity				X		Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts				X		Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores:

The additional generator would cause no disruption to the social structures and mores in the area because the source would be a minor industrial source of emissions, would be operating at an already established drum mix asphalt plant, would be separated from the general population, and would only have temporary and intermittent operations. Additionally, the equipment would be required to operate according to the conditions placed in Permit #2699-02. Thus, no impacts upon social structures or mores are expected to result.

B. Cultural Uniqueness and Diversity

The generator operation would cause no disruption to the above-cited economic and social resources or cultural uniqueness and diversity of the human environment in any given area of operation because the source would be a minor industrial source of emissions, would typically operate in an existing industrial site used for such purposes, and would operate on a temporary basis. The predominant use of the surrounding area would not change as a result of the proposed project.

C. Local and State Tax Base and Tax Revenue

The generator would have little, if any, impact on the local and state tax base and tax revenue because the generator would be operated at an established drum mix asphalt plant and would be a minor industrial source and would conduct only seasonal and intermittent operations. The addition of the generator would not require the use of additional employees. Thus only minor impacts to the local and state tax base and revenue could be expected from the employees and facility production. Furthermore, the impacts to local tax base and revenue would be minor because the source would be portable and money generated for taxes would be widespread.

D. Agricultural or Industrial Production

Minor impacts to agricultural or industrial production are expected as the proposed action is for a generator to be operated at an established drum mix asphalt plant. However, the proposed operation remains relatively small by industrial standards. Overall, potential impacts to agricultural and industrial production are expected to be minor.

E. Human Health

Permit #2699-02 would include limits and conditions to ensure that the operation of the generator would comply with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. The air emissions from this generator would be minimized by the use of water spray and other process limits. Therefore, only minor impacts would be expected on human health from the proposed asphalt plant facility.

F. Access to and Quality of Recreational and Wilderness Activities

Noise from the facility would be minor because the generator would be small by industrial standards and would operate at an established drum mix asphalt plant. As a result, the amount of noise generated from the generator would be minimal for the area. Therefore, any impacts to the quality of recreational and wilderness activities created by the proposed project would be expected to be minor and short-lived.

#### G. Quantity and Distribution of Employment

The additional generator operation would occur at an existing drum mix asphalt plant and would have no impacts upon the quantity and distribution of employment in this area of operation. Knife River would not hire new employees for the project. Therefore, no effects upon the quantity and distribution of employment in this area would be expected.

#### H. Distribution of Population

The proposed generator would not require additional employees to operate thereby resulting in no permanent immigration into or emigration out of a given area. Therefore, the proposed project would not impact the above-cited economic and social resources of the human environment at the initially proposed or any other given operating site.

#### I. Demands for Government Services

No increases would be seen in traffic on existing roadways in the area because of the additional generator. In addition, government services would be required for acquiring the appropriate permits for the proposed project and to verify compliance with the permits that would be issued. Overall, any demands for government services would be minor.

#### J. Industrial and Commercial Activity

The generator would not represent an increase in the industrial activity because it would be operated at an existing drum mix asphalt plant. No additional industrial or commercial activity would be expected as a result of the proposed operation.

#### K. Locally Adopted Environmental Plans and Goals

Permit #2699-02 would contain limits for protecting air quality and to keep facility emissions in compliance with any applicable ambient air quality standards, as a locally adopted environmental plan or goal for operating at this proposed site. Because the generator would be operated at a small and portable source, and would have intermittent and seasonal operations, any impacts from the facility would be minor and short-lived. Therefore, the overall industrial nature of the area would not change as a result of the proposed project and any associated impacts would be minor.

#### L. Cumulative and Secondary Impacts

The generator operations would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate areas of operation because the generator would be operated at a portable and temporary source. No increases in traffic would be expected as a result of the proposed project.

*Recommendation:* An Environmental Impact Statement (EIS) is not required. Permit #2699-02 includes conditions and limitations to ensure the facility will operate in compliance with all applicable air quality rules and regulations. In addition, all impacts associated with the proposed action are expected to be insignificant or minor.

*If an EIS is not required, explain why the EA is an appropriate level of analysis:* All potential effects resulting from construction and operation of the proposed facility are minor; therefore, an EIS is not required.

*Other groups or agencies contacted or which may have overlapping jurisdiction:* Department of Environmental Quality – Industrial and Energy Minerals Bureau (Permit #FSC-089), Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Heritage Program.

*Individuals or groups contributing to this EA:* Department of Environmental Quality – Air Resources Management Bureau, Industrial and Energy Minerals Bureau; Montana Historical Society – State Historic Preservation Office; Natural Resource Information System – Montana Natural Heritage Program.

*EA prepared by:* Julie Merkel

*Date:* 10/03/08